ELECTRICAL ABBREVIATIONS, MOUNTING HEIGHTS, AND GENERAL LAYOUT NOTES

ELECTRICAL ABBREVIATIONS

NUMBER	
1PH	SINGLE-PHASE
1Ø	SINGLE-PHASE
1P	SINGLE POLE
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
3Ø	THREE-PHASE
4/C	FOUR-CONDUCTOR
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
A	
A	AMPERE
A/E	ARCHITECT/ENGINEER
ABBRV	ABBREVIATION
AC	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AF	AMPERE FRAME
AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR
AFFF	ABOVE FINISHED FIRST FLOOR
AFG	ABOVE FINISHED GRADE
AFR	ABOVE FINISHED ROOF
AFS	ABOVE FINISHED SLAB
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
ALT NO	ALTERNATE NUMBER
AMP	AMPERE
APPROX	APPROXIMATE
AT	AMPERE TRIP
ATC	AUTOMATIC TEMP CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	AUDIO VISUAL
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
B	
BAS	BUILDING AUTOMATION SYSTEM
BFF	BELOW FINISH FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSEPOWER
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
BLW	BELOW
BOS	BOTTOM OF STEEL
C	
C	CELSIUS OR CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFM	CUBIC FEET PER MINUTE
CL	CENTER LINE
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	COMPANY
COAX	COAXIAL CABLE
COL	COLUMN
COMM	COMMUNICATION
CPT	CONTROL POWER TRANSFORMER
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CU	COPPER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
D	
D	DEEP or DEPTH
DB	DECIBEL
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIA	DIAMETER
DISC	DISCONNECT

DISTR	DISTRIBUTION
DIV	DIVISION
DL	DAMP LOCATION
DN	DOWN
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DT	DOUBLE THROW
DWG	DRAWING
E	
E	EAST OR EMERGENCY
EA	EACH
EC	ELECTRICAL CONTRACTOR
EFF	EFFICIENCY
ELEC	ELECTRIC
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	ENERGY MANAGEMENT SYSTEM
ENCL	ENCLOSURE
EO	ELECTRICALLY OPERATED
EPA	ENVIR PROTECTION AGENCY
EPO	EMERGENCY POWER OFF
EP	EXPLOSION PROOF
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETC	AND SO FORTH or ET CETERA
EW	EACH WAY
EXST or EXIST	EXISTING
F	
F	FAHRENHEIT
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FDR	FEEDER
FED	FEDERAL
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FACTORY MUTUAL
FPC	FIRE PROTECTION CONTRACTOR
FREQ	FREQUENCY
FT	FEET OR FOOT
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	
G	GROUND
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRC INTERRUPTER
GRD	GROUND
H	
H	HIGH
HAZ	HAZARD
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HV	HIGH VOLTAGE
Hz	HERTZ (FREQUENCY)
I	
I/O	INPUT/OUTPUT
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
ID NO	IDENTIFICATION NUMBER
IN	INCHES
INTERCOM	INTERCOMMUNICATION
INV	INVERTER
IR	INFRARED
J	
JB	JUNCTION BOX
K	
K	KILO OR KELVIN OR THOUSAND
KHZ	KILOHERTZ
KO	KNOCKOUT
KV	KILOVOLT
KVA	KILOVOLT AMPERE

KVAH	KILOVOLT AMPERE PER HOUR
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
KWHM	KILOWATT HOUR METER
L	
L	LONG OR LOCKABLE
LA	LIGHTNING ARRESTER
LB or LBS	POUND(S)
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LIN	LINEAR
LP	LIGHT POLE
LPW	LUMENS PER WATT
LRA	LOCKED ROTOR AMPS
LT	LEFT
LTG	LIGHTING
LV	LOW VOLTAGE
M	
mA	MILLIAMPERE
MAT	MATERIAL
MATV	MASTER ANTENNA TV SYSTEM
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFA	MAXIMUM FUSE AMPS
MFR	MANUFACTURER
MG	MOTOR GENERATOR
MH	MANHOLE OR METAL HALIDE
MHz	MEGAHERTZ
MIC	MICROPHONE
MIN	MINIMUM OR MINUTE
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOCP	MAX OVERCURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
MOP	MAX OVERCURRENT PROTECTION
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MILLIVOLT
MVA	MEGAVOLT-AMPERE
mW	MILLIWATT
MW	MEGAWATT
MWH	MEGAWATT HOUR
N	
N	NORTH OR NEUTRAL
NA or N/A	NOT APPLICABLE
NC or N/C	NORMALLY CLOSED
NE	NORMAL/EMERGENCY
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NEUT	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOC
NF	NONFUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NUMBER
NO or N/O	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLOAD
P	
P	PENDANT OR POLE
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PC	PLUMBING CONTRACTOR
PCU	POWER CONDITIONING UNIT
PE	PROFESSIONAL ENGINEER
PEC	PHOTOELECTRIC CELL
PF	POWER FACTOR
PFFB	PROVISION FOR FUTURE BREAKER
PH	PHASE
PL	PROPERTY LINE
PN	PART NUMBER

PNL	PANEL
PO	PURCHASE ORDER
POCC	POINT OF COMMON COUPLING
PRELIM	PRELIMINARY
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PV	PHOTOVOLTAIC
PWR	POWER
Q	
QA/QC	QUAL ASSURANCE/QUAL CONTROL
QTY	QUANTITY
R	
R	RADIUS
RCP	REFLECTED CEILING PLAN
RECPT	RECEPTACLE
REV	REVISION
RF	RADIO FREQUENCY
RFI	REQUEST FOR INFORMATION
RM	ROOM
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RT	RIGHT
S	
S	SOUTH
SCH or SCHED	SCHEDULE
SCR	SEMICONDUCTOR CONTROLLED RECTIFIER
SEC	SECOND OR SECONDARY
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SQ	SQUARE
SQ FT	SQUARE FOOT (FEET)
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
ST	SHUNT TRIP OR SINGLE THROW
STD	STANDARD
STP	SHIELDED TWISTED PAIR
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T	
TEL	TELEPHONE
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TL	TWIST LOCK
TV	TELEVISION
TYP	TYPICAL
U	
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	
V	VOLT
VA	VOLT AMPERE
VAM	VOLT-AMMETER
VAR	VARIES
VAR	VOLT AMPERE REACTIVE
VD	VOLTAGE DROP
VF	VARIABLE FREQUENCY
VFD	VARIABLE FREQUENCY DRIVE
VOLTS	VOLTAGE
VR	VOLTAGE REGULATOR
W	
W	WATT OR WIRE
W/	WITH
W/O	WITHOUT
WL	WET LOCATION
WP	WEATHERPROOF
WT	WATERTIGHT OR WEIGHT
X	
XFER	TRANSFER
XFMR	TRANSFORMER
Y	
Y	WYE
YR	YEAR
Z	

NOTE: NOT ALL ABBREVIATIONS OR TERMS INDICATED ARE USED ON THESE CONTRACT DOCUMENTS.

EQUIPMENT ABBRV

A	
AHU	AIR HANDLING UNIT
B	
B	BOILER
BC	BLOWER COIL UNIT
BFWP	BOILER FEEDWATER PUMP
C	
CFU	CHEMICAL FEED UNIT
CH	CHILLER
CHWP	CHILLED WATER PUMP
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
D	
DH	DUCT HEATER
DWH	DOMESTIC WATER HEATER
E	
EBB	ELECTRIC BASEBOARD
ECU	EVAPORATIVE COOLING UNIT
EF	EXHAUST FAN
EHC	ELECTRIC HEATING COIL
EHD	ELECTRIC HAND DRYER
EHP	ELECTRIC HEATING PANEL
ELEV	ELEVATOR
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
F	
FCU	FAN COIL UNIT
FOP	FUEL OIL PUMP
G	
GUH	GAS FIRED UNIT HEATER
H	
H	HUMIDIFIER
HC	HEATING COIL
HP	HEAT PUMP
HRU	HEAT RECOVERY UNIT
HWCP	HOT WATER CIRC PUMP
HWP	HOT WATER PUMP
I	
IF	INTAKE FAN
IRH	INFRARED HEATER
IWH	INSTANTANEOUS WATER HTR
J	
JP	JOCKEY PUMP
L	
L	AUTOMATIC FAUCET SENSOR
M	
MAU	MAKE UP AIR UNIT
MOD	MOTOR OPERATED DAMPER
O	
OHD	OVERHEAD DOOR
P	
P	PUMP
PHC	PREHEAT COIL
R	
RAF	RETURN AIR FAN
REF	REFRIGERATOR
RHC	REHEAT COIL
RTU	ROOF TOP UNIT
S	
SCU	SELF CONTAINED UNIT
SD	SMOKE DAMPER
SF	SUPPLY FAN
SP	SUMP PUMP
SS	SPLIT SYSTEM FAN
T	
TC	TRASH COMPACTOR
TMV	THERMOSTATIC MIXING VALVE
U	
UH	UNIT HEATER
UV	UNIT VENTILATOR
V	
VAV	VARIABLE AIR VOLUME BOX
VRP	VACUUM RETURN PUMP
W	
WH	WALL HEATER

WIRE SEPARATION NOTES

1. ANALOG, DIGITAL, AND LOW VOLTAGE POWER CIRCUITS TO BE RUN IN SEPARATE RACEWAYS OR CABLE SETS AS INDICATED.
2. SEPARATE WIRING BY LEVEL AS OUTLINED BELOW:

   LEVEL 1-1 ANALOG SIGNALS LESS THAN 50V AND LESS THAN 50mA
   4-20mA SHIELDED INSTRUMENTATION.
   SHIELDED LOW VOLTAGE INSTRUMENTATION.
   VARIABLE SPEED DRIVE SPEED SIGNALS.

   LEVEL 1-2 DIGITAL SIGNAL AND DATA BUSSES.
   PROGRAMMABLE LOGIC CONTROLLER BUSSES.
   METER SYSTEM DATA BUS.
   INSTRUMENTATION REMOTE TERMINAL UNIT BUS.

   LEVEL 2-1 ANALOG SIGNALS OVER 50V AND LESS THAN 240V.
   TACHOMETER GENERATORS.

   LEVEL 2-2 DIGITAL AND DISCRETE INPUTS TO PROGRAMMABLE LOGIC CONTROLLERS AND REMOTE TERMINAL UNITS. ALL OUTPUTS SUPPLYING RELAY COILS SHALL HAVE SURGE SUPPRESSION.

   LEVEL 3-1 POWER CIRCUITS OF 20A OR LESS AND 120V OR LESS.
   LIGHTING AND RECEPTACLE CIRCUITS TO BE IN A SEPARATE CONDUIT UNO.
   CLASS 1 CONTROL CIRCUITS ORIGINATING IN AN MCC COMPARTMENT OR A MOTOR STARTER CAN BE ROUTED WITH POWER CIRCUIT FROM SAME COMPARTMENT.

   LEVEL 4-1 POWER CIRCUITS OVER 20A UP TO 400A, LESS THAN 600V. EACH SHALL BE RUN IN SEPARATE CONDUITS.

   LEVEL 5-1 FEEDERS OVER 400A.
3. EACH LEVEL INDICATED ABOVE TO BE INSTALLED IN SEPARATE RACEWAY OR CABLE SET UNLESS NOTED OTHERWISE OR INDICATED BY THESE CONTRACT DOCUMENTS.
4. WHERE DIFFERENT LEVEL SYSTEMS ARE INSTALLED IN PARALLEL RUNS EXCEEDING FIVE (5) FEET OR LONGER, PROVIDE PHYSICAL SEPARATION AS SHOWN IN THE TABLE.
5. IN ALL JUNCTION/PULL BOXES WITH MULTIPLE VOLTAGES, PROVIDE GROUNDED METALLIC BARRIERS TO MAINTAIN SEPARATION.
6. ONLY EXTERNAL INTERFACE SIGNALS ARE SHOWN FOR MOTOR/CONTROLLER STARTERS, PROGRAMMABLE DEVICES, AND VARIABLE SPEED DRIVES (VFD). INTERNAL SIGNALS NECESSARY FOR CORRECT FUNCTIONING MUST BE PROVIDED AND COORDINATED WITH ALL REQUIREMENTS.
7. ALL INTERCONNECTING WIRING AND TERMINATIONS BETWEEN EQUIPMENT BY CONTRACTOR UNO.
8. CONTRACTOR SHALL PROVIDE THE OWNER WITH A FULL SIZE SET OF LOOP AND INTERFACE WIRING DIAGRAMS WITH FILLED IN TERMINAL BLOCK AND WIRE NUMBERS.
9. REFER TO WIRE SEPARATION NOTED FOR COMBINING WIRING.

	LEVEL 1	2	3	4	5
LEVEL 1	0	1"	3"	12"	12"
2	1"	0	3"	9"	12"
3	3"	3"	0	3"	6"
4	12"	9"	3"	0	0

GENERAL ELECTRICAL NOTES

A. COORDINATE INSTALLATION OF NEW ITEMS AND EQUIPMENT WITH THE OWNER'S REPRESENTATIVE, MAINTENANCE STAFF, AND THE WORK OF OTHER CONTRACTORS. THE CONTRACTOR SHALL INCUR ALL COSTS ASSOCIATED WITH THE RELOCATION OF EQUIPMENT CONFLICTING WITH NEW WORK BY OTHER DISCIPLINES THAT HAS NOT BEEN COORDINATED.

B. FIELD VERIFY ALL DIMENSIONS. DRAWINGS ARE ILLUSTRATIVE AND MAY NOT REFLECT EXACT CONDITIONS OR DIMENSIONS.

C. DO NOT SCALE THE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND SYSTEMS. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING AND COMPONENT. DO NOT USE THE PLANS FOR EXACT LOCATION OF EQUIPMENT, FIXTURES OR ARCHITECTURAL ITEMS SUCH AS WALLS, WINDOWS, SOFFITS, AND PILASTERS. SPECIFIC LOCATIONS, MOUNTING HEIGHTS AND OVERALL DIMENSIONS OF DEVICES AND FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS WHEN AVAILABLE.

D. DRAWINGS SPECIFIC TO THIS TRADE DO NOT LIMIT THE RESPONSIBILITY OR WORK REQUIRED BY THE CONTRACT DOCUMENTS. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR COMPLETE INFORMATION PRIOR TO BID.

E. WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MOST STRINGENT SHALL APPLY. NOTIFY THE ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.

F. NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAWCUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.

G. BRANCH CIRCUIT SIZING FROM DISCONNECT, STARTER OR VFD, OR CONTROL PANEL TO MOTOR/EQUIPMENT SHALL MATCH WHAT IS SHOWN FROM MCC/PANELBOARD TO DISCONNECT, STARTER OR VFD, OR CONTROL PANEL UNO. MOTOR BRANCH CIRCUITS FED FROM VFD SHALL BE VFD CABLE IN APPROPRIATELY SIZED CONDUIT.

H. ALL EQUIPMENT INSTALLED WITHIN AREAS THAT ARE LISTED AS CLASSIFIED AREAS SHALL BE UL LISTED AND LABELED FOR INSTALLATION IN THAT AREA. ALL CONDUIT TRANSITIONING FROM CLASSIFIED AREAS TO UNCLASSIFIED AREAS SHALL HAVE PROPER SEAL OFF FITTINGS.

I. ALL WORK SHOWN IN BOLD IS NEW WORK OR MODIFICATION OF EXISTING INSTALLATIONS TO BE COMPLETED BE THE CONTRACTOR UNDER THIS PROJECT. SEE PROJECT SPECIFICATIONS, SEQUENCE / PHASING OF WORK, AND DIVISION 1 FOR ADDITIONAL REQUIREMENTS FOR THIS PROJECT. CONTRACTOR SHALL READ AND UNDERSTAND THE REQUIREMENTS BEFORE SUBMITTING BID OR COMPLETING CONTRACTOR WORK.

MOUNTING HEIGHTS

LIGHTING

EMERGENCY BATTERY UNIT - WALL
18" BELOW CEILING OR 8'-0" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

EMERGENCY LIGHT - REMOTE HEAD
12" BELOW CEILING OR 8'-0" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

EXIT SIGN - WALL
6" ABOVE DOOR JAMB BUT NO HIGHER THAN 8'-0" ABOVE FINISHED FLOOR

LIGHT FIXTURE - WALL
SEE SPECIFICATIONS OR LIGHT FIXTURE SCHEDULE FOR MOUNTING HEIGHT

LIGHTING CONTROL PANEL - WALL
TOP OF TRIM 6'-0" ABOVE FINISHED FLOOR. IF CABINET IS OVER 6'-0" TALL, MOUNT BOTTOM EDGE 6" ABOVE FINISHED FLOOR

WIRING DEVICES

CLOCK RECEPTACLE
7'-0" ABOVE FINISHED FLOOR

MOTION SENSOR - WALL
8'-0" ABOVE FINISHED FLOOR OR AS RECOMMENDED BY MANUFACTURER

PHOTOELECTRIC CELL - WALL
12" FROM TOP OF ROOM ON NORTH FACE OF BUILDING

PUSHBUTTON - WALL
SAME AS LIGHTING SWITCHES

RECEPTACLE - WALL
RECEPTACLES OCCURRING IN STRUCTURAL TILE, BRICK, OR BLOCK WALL SHALL BE LOCATED ABOVE MASONRY JOINTS NEAREST THE APPROPRIATE MOUNTING HEIGHT AS INDICATED BELOW

FINISHED SPACE STANDARD
18" ABOVE FINISHED FLOOR. WHERE INTERFERENCE WITH HEATING EQUIPMENT REQUIRES HIGHER MOUNTING, MOUNT AS DIRECTED BY THE ENGINEER

COUNTERS
6" ABOVE BACK SPLASH OR COUNTER. CONSTRUCTION OF COUNTERS AND HEIGHTS OF BACKS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE ROUGH-IN

UNFINISHED SPACE
42" ABOVE FINISHED FLOOR EXCEPT WHERE INTERFERENCE WITH MECHANICAL EQUIPMENT REQUIRES HIGHER MOUNTING

EXTERIOR - WALL
24" ABOVE FINISHED FLOOR. IF RECEPTACLE IS LESS THAN 24" ABOVE FINISHED GRADE, INCREASE MOUNTING HEIGHT TO MAINTAIN 24" ABOVE FINISHED GRADE

ROOF - WALL
24" ABOVE FINISHED FLOOR

RECEPTACLE - SPECIAL PURPOSE
SAME AS RECEPTACLES

SWITCH - LIGHTING
42" ABOVE FLOOR ON STRIKE SIDE OF DOOR. WHERE SWITCHES OCCUR IN BRICK, TILE, OR BLOCK WALLS, THEY SHALL BE MOUNTED AT VERTICAL MASONRY JOINT AND IN EITHER TOP OR BOTTOM HORIZONTAL JOINT, WHICHEVER IS CLOSEST TO THE MOUNTING HEIGHT. WHERE SWITCH HEIGHT OCCURS AT POINT OF CHANGE OF FINISH, THEY SHALL BE RAISED OR LOWERED TO OCCUR IN ONE FINISH

TELEVISION RECEPTACLE - WALL
7'-0" ABOVE FINISHED FLOOR OR SAME HEIGHT AS TELEVISION OUTLET

FIRE ALARM

AUDIBLE - WALL
6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

CONTROL PANEL - WALL
TOP OF TRIM 6'-0" ABOVE FINISHED FLOOR. IF CABINET IS OVER 6'-0" TALL, MOUNT BOTTOM EDGE 6" ABOVE FINISHED FLOOR

PULL STATION
42" ABOVE FINISHED FLOOR

REMOTE ANNUNCIATOR STATION
5'-0" ABOVE FINISHED FLOOR

REMOTE DUCT DETECTOR TEST STATION - WALL
5'-0" ABOVE FINISHED FLOOR

VISUAL - WALL
6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

VISUAL / AUDIBLE (COMBINATION TYPE) - WALL
6" (CENTER OF VISUAL) BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

DISTRIBUTION EQUIPMENT

BLANK OUTLET - WALL
SAME AS RECEPTACLES

CABINET (EQUIPMENT) - WALL
TOP OF TRIM 6'-0" ABOVE FINISHED FLOOR. IF CABINET IS OVER 6'-0" TALL, MOUNT BOTTOM EDGE 6" ABOVE FINISHED FLOOR

CIRCUIT BREAKER - ENCLOSED
5'-0" ABOVE FINISHED FLOOR

CONTACTOR
5'-0" ABOVE FINISHED FLOOR

DISCONNECT SWITCH
5'-0" ABOVE FINISHED FLOOR

GENERATOR REMOTE ANNUNCIATOR STATION
5'-0" ABOVE FINISHED FLOOR

PANELBOARD / TRANSFER SWITCH
TOP OF TRIM 6'-0" ABOVE FINISHED FLOOR. IF PANELBOARD IS OVER 6'-0" TALL, MOUNT BOTTOM EDGE OF PANELBOARD 6" ABOVE FINISHED FLOOR

SURFACE RACEWAY - HORIZONTAL RUN
SAME AS RECEPTACLES

THERMAL SWITCH - WALL
SAME AS LIGHT SWITCHES

TELECOMMUNICATION / NETWORK

AREA OF RESCUE ASSISTANCE SIGN
6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

AREA OF RESCUE ASSISTANCE INTERCOM MASTER STATION
42" ABOVE FINISHED FLOOR

AREA OF RESCUE ASSISTANCE INTERCOM STATION
42" ABOVE FINISHED FLOOR

BELL
80" ABOVE FINISHED FLOOR

DATA / VOICE OUTLET - WALL
SAME AS RECEPTACLES

HORNS - OUTDOOR
12" BELOW EDGE OF ROOM

TELEPHONE OUTLET - WALL
LOW: SAME AS RECEPTACLES
HIGH: 48" ABOVE FINISHED FLOOR

SECURITY / ACCESS CONTROL / SURVEILLANCE

AUDIBLE (BUZZER) - WALL
6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

BIOMETRIC READER
48" ABOVE FINISHED FLOOR

CAMERA - WALL
7'-6" ABOVE FINISHED FLOOR

CARD / PROXIMITY READ
48" ABOVE FINISHED FLOOR

HORNS - OUTDOOR
12" BELOW EDGE OR ROOF

INTERCOM STATION
48" ABOVE FINISHED FLOOR

MONITOR - WALL
7'-6" ABOVE FINISHED FLOOR

PUSHBUTTON - WALL
SAME AS LIGHTING SWITCH

OCCUPANCY SENSOR - WALL
8'-0" ABOVE FINISHED FLOOR OR AS RECOMMENDED BY MANUFACTURER

SPEAKER - WALL
7'-6" ABOVE FINISHED FLOOR

VISUAL (STROBE) - WALL
6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER

MOUNTING HEIGHT NOTES:

1. UNLESS INDICATED OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER, CENTERLINE OF DEVICE SHALL BE AS INDICATED ABOVE.
2. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, THE CONTRACTOR SHALL INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE AND COMPLY WITH THE REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. WHERE EQUIPMENT IS INTENDED, SPECIFIED, OR NOTED TO BE MOUNTED OTHER THAN INDICATED ABOVE, MOUNT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED.
3. WHERE MULTIPLE DEVICES ARE INSTALLED WITHIN CLOSE PROXIMITY TO EACH OTHER, THEY SHALL BE INSTALLED AT SAME HEIGHT.
4. NOT ALL EQUIPMENT INDICATED WITH MOUNTING HEIGHTS ARE ON THESE CONTRACT DOCUMENTS.

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MARK	ISSUED DATE	DESCRIPTION

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